



**Appendix A**

**Claim Amendments**

1-20. (Canceled)

21. (Previously presented) A method of treatment or prophylaxis of a disease associated with or based on impairment or dysfunction of cerebral vascular reactivity selected from the group consisting of sepsis associated encephalopathy, sepsis, toxic encephalopathy, encephalopathy associated with autoimmune thyroiditis, autoimmune thyroiditis, cerebral microangiopathy, hypercholesterolemia and hypertriglyceridemia in a patient afflicted with such disease comprising the step of administering a pharmacologically tolerable and therapeutically effective amount of a PDE5 inhibitor to the patient.

22. (Previously presented) The method according to claim 21, wherein the disease is sepsis associated encephalopathy.

23. (Previously presented) The method according to claim 21, wherein the PDE5 inhibitor is selected from the group consisting of 3-ethyl-8-[2-(4-morpholinylmethyl)benzylamino]-2,3-dihydro-1H-imidazo[4,5-g]quinazoline-2-thione, 1-(2-chlorobenzyl)-3-isobutyryl-2-propylindole-6-carboxamide, 9-

bromo-2-(3-hydroxypropoxy)-5-(3-pyridylmethyl)-4H-pyrido[3,2,1-jk]-  
carbazol-4-one, 4-(1,3-benzodioxol-5-ylmethylamino)-2-(1-imidazolyl)-6-  
methylthieno[2,3-d]pyrimidine, 6-(2-isopropyl-4,5,6,7-terahydropyrazolo[1,5-  
a]pyridin-3-yl)-5-methyl-5-methyl-2,3,4,5-tetrahydropyridazin-3-one, 5-(4-  
methylbenzyl)-3-(1-methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-  
d]pyrimidin-7-one, 3-(1-methyl-4-phenylbutyl)-5-pyridin-4-ylmethyl-3,6-  
dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-(4-bromobenzyl)-3-(1-  
methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-  
benzyl-3-(1-methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-  
d]pyrimidin-7-one, 5-(3,4-dimethoxybenzyl)-3-(1-methyl-4-phenylbutyl)-3,6-  
dihydro-[1,2,3]triazolo-[4,5-d]pyrimidin-7-one, 5-(3,4-dichlorobenzyl)-3-(1-  
methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one,  
5-biphenyl-4-ylmethyl-3-(1-methyl-4-phenylbutyl)-3,6-dihydro-  
[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-(4-aminobenzyl)-3-(1-methyl-4-  
phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one,  
5-(hydroxyphenylmethyl)-3-(1-methyl-4-phenylbutyl)-3,6-dihydro-  
[1,2,3]triazolo-[4,5-d]pyrimidin-7-one, 5-benzo[1,3]dioxol-5-ylmethyl-3-(1-  
methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, N-4-  
[3-(1-methyl-4-phenylbutyl)-7-oxo-6,7-dihydro-3H-[1,2,3]triazolo-[4,5-  
d]pyrimidin-5-ylmethyl]phenylacetamide, 5-benzoyl-3-(1-methyl-4-  
phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]-pyrimidin-7-one, 3-(1-methyl-  
4-phenylbutyl)-5-[4-(morpholine-4-sulphonyl)benzyl]-3,6-  
dihydro[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 3-(1-methyl-4-phenylbutyl)-5-[3-

(morpholine-4-sulphonyl)benzyl]-3,6-dihydro[1,2,3]triazolo[4,5-d]pyrimidin-7-one, N-methyl-4-[3-(1-methyl-4-phenylbutyl)-7-oxo-6,7-dihydro-3H-[1,2,3]-triazolo-[4,5-d]pyrimidin-5-ylmethyl]-benzenesulphonamide, N-(2-dimethylaminoethyl)-4-[3-(1-methyl-4-phenylbutyl)-7-oxo-6,7-dihydro-3H-[1,2,3]triazolo[4,5-d]pyrimidin-5-ylmethyl]benzenesulphonamide, N-(2-hydroxyethyl)-4-[3-(1-methyl-4-phenylbutyl)-7-oxo-6,7-dihydro-3H-[1,2,3]triazolo[4,5-d]pyrimidin-5-ylmethyl]benzenesulphonamide, ethyl 1-[3-[3-(1-methyl-4-phenylbutyl)-7-oxo-6,7-dihydro-3H-[1,2,3]-triazolo-[4,5-d]pyrimidin-5-ylmethyl]benzenesulphonyl]piperidinecarboxylate, 3-(1-methyl-4-phenylbutyl)-5-[4-(4-methylpiperazin-1-sulphonyl)benzyl]-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-benzo[1,3]dioxol-5-ylmethyl-3-[1-ethy-heptyl]-3,6-dihydro-[1,2,3]-triazolo[4,5-d]pyrimidin-7-one, 3-[1-(1-hydroxyethyl)-4-phenylbutyl]-5-[4-(morpholine-4-sulphonyl)benzyl]-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-[6-fluoro-1-(phenylmethyl)-1H-indazol-3-yl]-2-furanmethanol, 1-benzyl-6-fluoro-3-[5-(hydroxymethyl)furan-2-yl]-1H-indazole, 2-(1H-imidazol-1-yl)-6-methoxy-4-(2-methoxyethylamino)quinazoline, 1-[[3-(7,8-dihydro-8-oxo-1H-imidazo[4,5-g]quinazolin-6-yl)-4-propoxyphenyl]sulphonyl]-4-methylpiperazine, 4-(3-chloro-4-methoxybenzylamino)-1-(4-hydroxypiperidin-1-yl)phthalazine-6-carbonitrile, 1-[6-chloro-4-(3,4-methylendioxybenzylamino)quinazolin-2-yl]piperidin-4-carboxylic acid, (6R,12aR)-6-(1,3-benzodioxol-5-yl)-2-methyl-1,2,3,4,6,7,12,12a-octahydropyrazino[2',1':6,1]pyrido[3,4-b]indole-1,4-dione (tadalafil), (6R,12aR)-

2,3,6,7,12,12a-hexahydro-2-methyl-6-(3,4-methylenedioxyphenyl)-pyrazino-  
[2',1':6,1]pyrido[3,4-b]indole-1,4-dione, 4-ethoxy-2-  
phenylcycloheptylimidazole, (6-bromo-3-methoxymethylimidazo[1,2-  
a]pyrazin-8-yl)methylamine, 8-[(phenylmethyl)thio]-4-(1-morpholinyl)-2-(1-  
piperazinyl)pyrimidino[4,5-d]pyrimidine, (+)-cis-5-methyl-2-[4-  
(trifluoromethyl)benzyl]-3,4,5,6a,7,8,9-octahydrocyclopent[4,5]imidazo[2,1-  
b]purin-4-one, cis-2-hexyl-5-methyl-3,4,5,6a,7,8,9,9a-  
octahydrocyclopent[4,5]imidazo[2,1-b]purin-4-one, 5-[2-ethoxy-5-(4-methyl-  
1-piperazinylsulphonyl)phenyl]-1-methyl-3-n-propyl-1,6-dihydro-7H-  
pyrazolo[4,3-d]pyrimidin-7-one (sildenafil), 1-[[3-(6,7-dihydro-1-methyl-7-  
oxo-3-propyl-1H-pyrazolo[4,3-d]pyrimidin-5-yl)-4-ethoxyphenyl]sulfonyl]-4-  
methylpiperazine, 2-(2-propoxyphenyl)purin-6(1H)-one, 2-(2-  
propoxyphenyl)-1,7-dihydro-5H-purin-6-one, methyl 2-(2-methylpyridin-4-  
ylmethyl)-1-oxo-8-(2-pyrimidinylmethoxy)-4-(3,4,5-trimethoxyphenyl)-1,2-  
dihydro-[2,7]naphthyridin-3-carboxylate, methyl 2-(4-aminophenyl)-1-oxo-7-  
(2-pyridinylmethoxy)-4-(3,4,5-trimethoxyphenyl)-1,2-dihydroisoquinoline-3-  
carboxylate, 2-[2-ethoxy-5-(4-ethylpiperazin-1-ylsulfonyl)phenyl]-5-methyl-7-  
propylimidazo[5,1-f][1,2,4]triazin-4(3H)-one (vardenafil), 3,4-dihydro-6-[4-  
(3,4-dimethoxybenzoyl)-1-piperazinyl]-2(1H)-quinolinone (vesnarinone), 1-  
cyclopentyl-3-methyl-6-(4-pyridyl)pyrazolo[3,4-d]pyrimidin-4(5H)-one, 1-  
cyclopentyl-6-(3-ethoxy-4-pyridinyl)-3-ethyl-1,7-dihydro-4H-pyrazolo[3,4-d]-  
pyrimidin-4-one, 6-o-propoxyphenyl-8-azapurin-6-one, 3,6-dihydro-5-(o-  
propoxyphenyl)-7H-v-triazolo[4,5-d]pyrimidin-7-one and 4-methyl-5-(4-

pyridinyl)thiazole-2-carboxamide and the pharmaceutically acceptable derivatives of these compounds.

24. (Currently amended) The method according to claim 23 **[[3]]**, wherein the PDE5 inhibitor is selected from the group consisting of sildenafil, vardenafil, tadalafil, a pharmaceutically acceptable salt thereof and a solvate of the pharmaceutically acceptable salt thereof.
25. (Currently amended) The method according to claim 24 **[[4]]**, wherein the PDE5 inhibitor is selected from the group consisting of sildenafil citrate, vardenafil hydrochloride, the trihydrate of vardenafil hydrochloride and vardenafil dihydrochloride.
26. (Previously presented) The method according to claim 22, wherein the PDE5 inhibitor is selected from the group consisting of 3-ethyl-8-[2-(4-morpholinylmethyl)benzylamino]-2,3-dihydro-1H-imidazo[4,5-g]quinazoline-2-thione, 1-(2-chlorobenzyl)-3-isobutyryl-2-propylindole-6-carboxamide, 9-bromo-2-(3-hydroxypropoxy)-5-(3-pyridylmethyl)-4H-pyrido[3,2,1-jk]-carbazol-4-one, 4-(1,3-benzodioxol-5-ylmethylamino)-2-(1-imidazolyl)-6-methylthieno[2,3-d]pyrimidine, 6-(2-isopropyl-4,5,6,7-terahydropyrazolo[1,5-a]pyridin-3-yl)-5-methyl-5-methyl-2,3,4,5-tetrahydropyridazin-3-one, 5-(4-methylbenzyl)-3-(1-methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 3-(1-methyl-4-phenylbutyl)-5-pyridin-4-ylmethyl-3,6-

dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-(4-bromobenzyl)-3-(1-methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-benzyl-3-(1-methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-(3,4-dimethoxybenzyl)-3-(1-methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-(3,4-dichlorobenzyl)-3-(1-methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-biphenyl-4-ylmethyl-3-(1-methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-(4-aminobenzyl)-3-(1-methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-(hydroxyphenylmethyl)-3-(1-methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-benzo[1,3]dioxol-5-ylmethyl-3-(1-methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, N-4-[3-(1-methyl-4-phenylbutyl)-7-oxo-6,7-dihydro-3H-[1,2,3]triazolo[4,5-d]pyrimidin-5-ylmethyl]phenylacetamide, 5-benzoyl-3-(1-methyl-4-phenylbutyl)-3,6-dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 3-(1-methyl-4-phenylbutyl)-5-[4-(morpholine-4-sulphinyl)benzyl]-3,6-dihydro[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 3-(1-methyl-4-phenylbutyl)-5-[3-(morpholine-4-sulphonyl)benzyl]-3,6-dihydro[1,2,3]triazolo[4,5-d]pyrimidin-7-one, N-methyl-4-[3-(1-methyl-4-phenylbutyl)-7-oxo-6,7-dihydro-3H-[1,2,3]triazolo[4,5-d]pyrimidin-5-ylmethyl]-benzenesulphonamide, N-(2-dimethylaminoethyl)-4-[3-(1-methyl-4-phenylbutyl)-7-oxo-6,7-dihydro-3H-[1,2,3]triazolo[4,5-d]pyrimidin-5-ylmethyl]benzenesulphonamide, N-(2-hydroxyethyl)-4-[3-(1-methyl-4-phenylbutyl)-7-oxo-6,7-dihydro-3H-

[1,2,3]triazolo[4,5-d]pyrimidin-5-ylmethyl]benzenesulphonamide, ethyl 1-[3-  
 [3-(1-methyl-4-phenylbutyl)-7-oxo-6,7-dihydro-3H-[1,2,3]-triazolo-  
 [4,5-d]pyrimidin-5-ylmethyl]benzenesulphonyl]piperidinecarboxylate, 3-(1-  
 methyl-4-phenylbutyl)-5-[4-(4-methylpiperazin-1-sulphonyl)benzyl]-3,6-  
 dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-benzo[1,3]dioxol-5-ylmethyl-  
 3-[1-ethy-heptyl]-3,6-dihydro-[1,2,3]-triazolo[4,5-d]pyrimidin-7-one, 3-[1-(1-  
 hydroxyethyl)-4-phenylbutyl]-5-[4-(morpholine-4-sulphonyl)benzyl]-3,6-  
 dihydro-[1,2,3]triazolo[4,5-d]pyrimidin-7-one, 5-[6-fluoro-1-(phenylmethyl)-  
 1H-indazol-3-yl]-2-furanmethanol, 1-benzyl-6-fluoro-3-[5-  
 (hydroxymethyl)furan-2-yl]-1H-indazole, 2-(1H-imidazol-1-yl)-6-methoxy-4-  
 (2-methoxyethylamino)quinazoline, 1-[[3-(7,8-dihydro-8-oxo-1H-  
 imidazo[4,5-g]quinazolin-6-yl)-4-propoxyphenyl]sulphonyl]-4-  
 methylpiperazine, 4-(3-chloro-4-methoxybenzylamino)-1-(4-  
 hydroxypiperidin-1-yl)phthalazine-6-carbonitrile, 1-[6-chloro-4-(3,4-  
 methylenedioxybenzylamino)quinazolin-2-yl]piperidin-4-carboxylic acid,  
 (6R,12aR)-6-(1,3-benzodioxol-5-yl)-2-methyl-1,2,3,4,6,7,12,12a-octa-  
 hydropyrazino[2',1':6,1]pyrido[3,4-b]indole-1,4-dione (tadalafil), (6R,12aR)-  
 2,3,6,7,12,12a-hexahydro-2-methyl-6-(3,4-methylenedioxyphenyl)-pyrazino-  
 [2',1':6,1]pyrido[3,4-b]indole-1,4-dione, 4-ethoxy-2-  
 phenylcycloheptylimidazole, (6-bromo-3-methoxymethylimidazo[1,2-  
 a]pyrazin-8-yl)methylamine, 8-[(phenylmethyl)thio]-4-(1-morpholinyl)-2-(1-  
 piperazinyl)pyrimidino[4,5-d]pyrimidine, (+)-cis-5-methyl-2-[4-  
 (trifluoromethyl)benzyl]-3,4,5,6a,7,8,9-octahydrocyclopent[4,5]imidazo[2,1-

b]purin-4-one, cis-2-hexyl-5-methyl-3,4,5,6a,7,8,9,9a-octahydrocyclopent[4,5]imidazo[2,1-b]purin-4-one, 5-[2-ethoxy-5-(4-methyl-1-piperazinylsulphonyl)phenyl]-1-methyl-3-n-propyl-1,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one (sildenafil), 1-[[3-(6,7-dihydro-1-methyl-7-oxo-3-propyl-1H-pyrazolo[4,3-d]pyrimidin-5-yl)-4-ethoxyphenyl]sulfonyl]-4-methylpiperazine, 2-(2-propoxyphenyl)purin-6(1H)-one, 2-(2-propoxyphenyl)-1,7-dihydro-5H-purin-6-one, methyl 2-(2-methylpyridin-4-ylmethyl)-1-oxo-8-(2-pyrimidinylmethoxy)-4-(3,4,5-trimethoxyphenyl)-1,2-dihydro-[2,7]naphthyridin-3-carboxylate, methyl 2-(4-aminophenyl)-1-oxo-7-(2-pyridinylmethoxy)-4-(3,4,5-trimethoxyphenyl)-1,2-dihydroisoquinoline-3-carboxylate, 2-[2-ethoxy-5-(4-ethylpiperazin-1-ylsulfonyl)phenyl]-5-methyl-7-propylimidazo[5,1-f][1,2,4]triazin-4(3H)-one (vardenafil), 3,4-dihydro-6-[4-(3,4-dimethoxybenzoyl)-1-piperazinyl]-2(1H)-quinolinone (vesnarinone), 1-cyclopentyl-3-methyl-6-(4-pyridyl)pyrazolo[3,4-d]pyrimidin-4(5H)-one, 1-cyclopentyl-6-(3-ethoxy-4-pyridinyl)-3-ethyl-1,7-dihydro-4H-pyrazolo[3,4-d]pyrimidin-4-one, 6-o-propoxyphenyl-8-azapurin-6-one, 3,6-dihydro-5-(o-propoxyphenyl)-7H-v-triazolo[4,5-d]pyrimidin-7-one and 4-methyl-5-(4-pyridinyl)thiazole-2-carboxamide and the pharmaceutically acceptable derivatives of these compounds.

27. (Previously presented) The method according to claim 26, wherein the PDE5 inhibitor is selected from the group consisting of sildenafil, vardenafil,



tadalafil, a pharmaceutically acceptable salt thereof and a solvate of the pharmaceutically acceptable salt thereof.

28. (Previously presented) The method according to claim 27, wherein the PDE5 inhibitor is selected from the group consisting of sildenafil citrate, vardenafil hydrochloride, the trihydrate of vardenafil hydrochloride and vardenafil dihydrochloride.